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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WOOD, ELLEN S	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,381	NIEDERSTAETTER ET AL.	
	Examiner	Art Unit	
	ELLEN S. WOOD	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6-19,21 and 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4 and 6-19 and 21-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments, filed 08/17/2009, with respect to the rejection(s) of claim(s) 1, 3-4, 6-10, 12-19, and 21-23 under Merritt et al. (US 7,001,635, hereinafter "Merritt") in view of Ahlgren et al. (US 6,203,750, hereinafter "Ahlgren") in view of Cruz (US 2004/0062834) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 4, 6-10, 15-19 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, the applicant amends the claim to state "and the food casing water vapor permeability is essentially determined by the synthetic polymers". The water vapor permeability is determined by certain test conditions not by the type of polymers used in the composition. Is the applicant stating that the synthetic polymers are what give rise to the permeability properties of the casing? The claim is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4, 6-10, 15-19 and 23 are rejected as dependents from the independent claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, 4, 6-10, 12-19, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merritt et al. (US 7,001,635, hereinafter "Merritt") in view of Nobuyuki et al. (JP 2002-306059, hereinafter "Nobuyuki") in view of Ahlgren et al. (US 6,203,750, hereinafter "Ahlgren") in view of Cruz (US 2004/0062834).

Merritt discloses a casing that is made from plastics or polyamides (col. 6 lines 55-57). The shirred stick casings are self-sustaining and adapted for stuffing with products, particularly emulsions that form sausages (col. 6 lines 11-13). The casings are made from plastics or polyamides (col. 6 lines 55-57), which are considered soft polymers. A typical additive to a casing is a plasticizer (col. 6 lines 62-65). The casings are stuffed to form individual links (col. 11 lines 7-9), thus it would be known to one of ordinary skill in the art that the casings were closed at one end. The tubular casings are typically gathered into compressed shirred ("pleated") sticks using well-known processes and equipment (cols. 6-7 lines 65-67 and line 1). During the shirring operation it is common to coat the casing, particularly the inner surface, with a solution that contains ingredients such as anti-pleat lock agents to form shirred stick casings with self-sustaining properties (col. 7 lines 1-13). The tubular casing may be sprayed with a surfactant, water, and/or humectant (col. 7 lines 1-5). Mineral oil may also be

used to coat the casing during the shirring process (col. 7 lines 1-7). The examiner considers this a temporary setting of the shirring geometry and the resultant breakdown in tension of the shirred pleats. The method of forming a shirred sausage casing and filling the casing with meat on a high speed fully automatic (FAM) mechanical stuffer (col. 11 lines 7-9). The individual casings stuffed with meat were produced (col. 11 line 9). In general the polyamide used for the casing is nylon (col. 1 lines 62-63), which is an aliphatic polyamide. The plasticizer can include propylene glycol (col. 8 lines 6-9).

Merritt is silent with the specific properties that are associated with the self-sustaining shirred stick casing such as the bending percentage and the extension of the shirred food casing after shirring.

Merritt discloses that when shirred casing stick are used with automatic food stuffing equipment it is extremely important that shirred casing stick has the durability to be a self-sustaining article (col. 8 lines 58-61). Thus, it would be obvious to one of ordinary skill in the art at the time of the invention that if the shirred casing stick is self-sustaining the amount of bending under the effect of the casings own weight would be minimal to none.

Merritt discloses that the formation of the shirred casing sticks will have sufficient coherency to hold together from immediately after shirring to storage (cols. 8-9 lines 67 and 1-7). Thus, it would be obvious to one of ordinary sill in the art at the time of the invention that if the shirred casing stick maintains its shape after shirring the amount of extension in the longitudinal direction would be minimal to none when stored.

Merritt is silent with the composition of the casing containing water-soluble polymers.

Nobuyuki discloses a casing film for food composed of a mixture of a least polyvinylpyrrolidone, the water soluble polymer used by the applicant, and a thermoplastic resin, preferably polyamide resin [abstract]. The casings are permeable to moderate steam and are impermeable to moderate oxygen [0008]. The smoke treatment of the casings hold the smoke-dried scents, smoke-dried colors, and smoking flavor [0008]. The casing has compatibility with water which is necessary to allow the smoke component to penetrate effectively [[010]..

It would be obvious to one of ordinary skill in the art to substitute the casing composition of Nobuyuki with the polymeric casing composition of Merritt, because the casing composition of Nobuyuki provides the food casing to have permeability to steam but impermeable to oxygen, which allows for the smoke treatment of the casings [0007-0008].

Ahlgren discloses a polyamide containing casing which are shirred for use as cook-in casings for the packaging of processed meat products, such as ham, turkey, bologna, etc (col. 1 lines 11-18). The film from which the casing is made contains a layer comprising at least two polyamides (col. 2 lines 9-11). The filing of various types of casing with viscous meat emulsion can be carried out by various automatic and semi-automatic processes (col. 14 lines 50-52). Apparatus and processes are well known in the food casing art for producing shirred, tubular casings (col. 14 lines 58-59). Such apparatus may be employed in the preparation of pleated and compressed tubular

casing wherein the compression ratios are in the order of at least about 40:1 and up to about 100:1 or even greater (col. 14 lines 60-63). Using suitable food stuffing machinery, casing lengths can be stuffed with particulate or comminuted viscous material such as meat emulsion or the like, and thereafter formed into unit size lengths, using metal clips and/or heat seals (col. 14 lines 63-67). Merritt discloses that the tubular casings are typically gathered into compressed self-sustaining shirred sticks (col. 6 lines 65-67). Thus, it would be obvious to one of ordinary skill at the time of the invention that the compression ratio of Ahlgren would be used to form the shirred sticks of Merritt, because the apparatus and processes that use the compression ratios of Ahlgren are well known in the food casing art to form shirred, tubular casings (col. 14 lines 58-59).

Ahlgren is silent with the water vapor permeability and the bending effects of the shirred food casing.

Cruz discloses a polyamide-based sausage casing suitable for use with uncooked meats (abstract). The shirred stick casing is a polyamide based film [0020]. The shirred stick casing that is produce is sufficiently rigid for transportation to sausage manufacturers and provides sufficient resistance to premature unshirring and breakage during the filling process [0035]. The examiner considers the shirred stick casing of Cruz to have sufficient intrinsic stability to be processed on a stuffing machine. The polyamide resin blend can be biaxially stretch-oriented to produce a single-layered polyamide-based sausage casing (abstract). The thickness of that the shirred stick has a film thickness that ranges from 6 microns to about 80 microns [0031], thus the

thickness is less than 90 μm (1 micron equals 1 μm). The shirred stick casing is a polyamide based film [0020], which is considered a soft synthetic polymer. The shirred stick casing has excellent gas and moisture permeability properties (abstract). The shirred stick casing is produced from an aliphatic polyamide or copolyamide based resin [0022].

Cruz is silent with regards to the specific properties of the water vapor permeability and corona treating the outside surface.

Cruz discloses that the polyamide resin is blended a silicon-based barrier control agent for the specific purpose to increase the permeability of the sausage casing (abstract). Thus, it would be obvious to one of ordinary skill in the art at the time of the invention that the water vapor permeability of the sausage casing disclosed by Cruz could be adjusted as required for particular applications because the Cruz teaches how to adjust the gas and moisture barrier properties of the casings. (abstract).

Cruz discloses that the single-layered polyamide based sausage casings can have the printing of words, numbers, and graphics [0037]. Corona treating increases the surface energy of plastic films to improve wet ability and adhesion of inks. Thus, it would be obvious to one of ordinary skill in the art at the time of the invention to corona treat the outer surface of the shirred food casing to improve the adhesion of inks when printing words, number, and graphics onto the casings.

It would be obvious to one of ordinary skill in the art to combine the stability of the casing of Ahlgren with the water vapor permeability properties of Cruz with the formation of the shirred casings of the combination of Merritt and Nobuyuki , because

the combination of Cruz and Ahlgren would form a shirred casing that is a polyamide mixture that would improve the strength of the casing during stuffing of the sausage emulsion while maintaining the water vapor permeability properties and can be formed with the proper dimensions as seen in the combination of Merritt and Nobuyuki to form a casing that does not need the use of an separate support on an automatic stuffing machine and has smokability properties.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3-4, 6-10, 12-19 and 21-23 have been considered but are moot in view of the new ground(s) of rejection.

7. The applicant argues that US 635 is generally directed to cellulosic casing and that US 635 merely generically notes that casings formed from polymeric materials may be used within its invention.

In response, Merritt discloses a casing that is made from plastics or polyamides (col. 6 lines 55-57). Merritt discloses that plastic casings maybe used with the invention. Nobuyuki was used as a secondary reference disclosing a food casing that comprises polyamide resin and polyvinlypyrrolidone resin. Thus, the combination of Merritt and Nobuyuki disclose a food casing that is formed from synthetic polymers and water-soluble polymers.

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

8. The applicant argues that compression ratio can not be greater than 100 because the liquid smoke intended for transport into the food would have been removed.

In response, it noted that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding the inability of the casings of US 635 to by compressed at a ratio of greater than 100 must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001".

9. The applicant states that US 750 notes compression ratios of 40:1 as acceptable, noting that the compression ratio may be "even greater".

In response, US 750 specifically states such apparatus may be employed in the preparation of pleated and compressed tubular casing wherein the compression ratios are in the order of at least about 40:1 and up to about 100:1 or even greater (col. 14 lines 60-63).

However, note that while Ahlgren do not disclose all the features of the present claimed invention, Ahlgren is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, the compression ratios of a shirred casing in order to (motivation) and in combination with the primary reference, discloses the presently claimed invention.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794